



# Hexavalent Chromium Inspections

## Hexavalent Chromium

Chromium is a metal that exists in several different forms. Only hexavalent chromium is recognized as a human carcinogen. Hexavalent chromium is a byproduct in the manufacturing and processing in many modern industrial settings. Exposure to elevated levels of this substance should be avoided whenever possible.

Hexavalent chromium can enter the human body through inhalation, through skin contact, and by being ingested. Inhalation can occur during various manufacturing processes when proper ventilation or personnel protective equipment is not properly utilized. Ingestion typically occurs when chromium dust settles onto items such as cigarettes or hands that then make their way into human mouths.

There exist today both OSHA and NIOSH limits for exposure to hexavalent chromium.

Affordable testing procedures are available by qualified professionals and accredited laboratories to determine if elevated levels of hexavalent chromium are present.

## Hexavalent Chromium Testing

Hexavalent chromium (Cr(VI)) testing in some types of manufacturing facilities has become a common practice to safeguard the health and well-being of workers. The testing is designed to protect people from the dangerous health effects that can occur from Cr(VI).

Hexavalent chromium compounds are a group of chemical substances that contain the element chromium in its positive-6 valence (hexavalent) state. Occupational exposure to Cr(VI) can occur during the production of stainless steel, chromate chemicals, chromate pigments, glass manufacturing and other manufacturing processes.

Exposure to elevated levels of hexavalent chromium can cause a risk for lung cancer in humans according to the California Department of Health Services, the United States Environmental Protection Agency (EPA) and the United States Agency for Toxic Substances and Disease Registry.

## Hiring a Hexavalent Chromium Inspector

A qualified Hexavalent Chromium inspector should be able to provide references and qualifications. Industrial Hygienists are often involved in testing for Cr(VI) since most testing occurs in industrial setting.



- Worker exposure air sampling for Cr(VI) is typically performed using PVC filters that meet OSHA sample stability requirements.
- If elevated levels of hexavalent chromium are discovered a written evaluation describing the locations, levels and recommendations for corrective actions may be given. Suggestions to increase ventilation, personnel protective equipment, and/or to utilizing substances that do not produce Cr(VI) may be given.

It is important when hiring a professional to conduct the testing that only experienced and qualified professionals perform this important task. Be sure to also verify that any samples that are taken are to be analyzed by an accredited independent laboratory such as EMSL Analytical, Inc.

## Resources

### **American Indoor Air Quality Council**

[www.iaqcouncil.org](http://www.iaqcouncil.org)

### **American Industrial Hygiene Association**

[www.aiha.org](http://www.aiha.org)

### **California Indoor Air Quality Program**

[www.cal-iaq.org](http://www.cal-iaq.org)

### **EMSL Analytical, Inc.**

[www.emsl.com](http://www.emsl.com)

### **Indoor Air Quality Association**

[www.iaqa.org](http://www.iaqa.org)

### **LA Testing**

[www.LATesting.com](http://www.LATesting.com)

### **National Institute for Occupational Safety and Health**

<http://www.cdc.gov/topics/hexchrom/>

### **U.S. Department of Labor**

[www.osha.gov/SLTC/hexavalentchromium/index.html](http://www.osha.gov/SLTC/hexavalentchromium/index.html)

### **U.S. Environmental Protection Agency**

[www.epa.gov/iris/subst/0144.htm](http://www.epa.gov/iris/subst/0144.htm)

